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ABSTRACT

This research and demonstration project involved the establishment of a demonstration Nursery Center to provide for the daytime care of infants and toddlers in groups and for the evaluation of this experience. A descriptive account is given of the founding of the center and of its operation over a three-year period. Finding housing and suitable staff were two problems encountered. A breakdown of the budget of the center is presented. Other problems encountered and solved were the finding of sufficient outdoor space for play and the acquisition of equipment and supplies. A model was designed for a daily program at the nursery; the main focus of the program was on middle-class families. The model for the program required that the infant's parents be committed to the plan. Also included is a workable plan for the baby's care when he suffers minor illness. A group of children were tested in various areas. It was found that mental, psychomotor, and physical development equaled and in some cases exceeded that of children who did not attend the Center. (CK)

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FINAL REPORT

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A DEMONSTRATION PROJECT
Group Care Of Infants And Toddlers

JUNE 1970

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I. CONCERN WITH INFANT GROUP CARE. GROWTH OF INTEREST IN THE QUESTION OF ALL-DAY CARE FOR INFANTS AND TODDLERS.

At the beginning of the year 1965, when we at the University of North Carolina at Greensboro set out to survey patterns of daytime care of infants under three years of age, we foresaw only dimly the dimensions of the problem of daytime care for infants and the urgency of the need that was soon to develop for guidelines growing out of actual experience with babies and toddlers in out-of-home care.

The survey[1] pointed up the large proportion of mothers at all income levels with children younger than three who were gainfully employed outside the home: 26 per cent of white mothers, 40 per cent of non-white mothers. Of the 682 babies in the 501 families surveyed, 28 per cent were experiencing some form of supplementary mothering during the daytime hours, either in their own homes or away from home. Of the total sample of infants and toddlers, 16 per cent were cared for during the day outside their own homes.

Of those babies receiving supplementary mothering, more than half (54 per cent) had been younger than six months when someone other than the mother began caring for them as a regular daytime arrangement, and 70 per cent of this group were receiving supplementary mothering by one year of age.

That survey focused attention largely on the problems of child care facing the employed mother with very young children. In 1965 few could have seen "the shape of things to come." Experience with Head Start soon highlighted the importance of the years before three, and

OEO's Parent and Child Centers comcept came into being. There came a burgeoning of interest in programs of preventive health care and "compensatory education" during the earliest years of life as an antidote to a depriving cultural milieu. Professionals witnessed a growing research emphasis on infancy - there loomed the tidal wave of concern for providing continuing education for teen-age mothers, and the concomitant necessity to plan for day care of their infants.

The past five years have made breathtaking demands on persons associated with the field of infancy, and research and demonstration programs have been pressed to provide answers --- or even a few guidelines --- to many questions and problems long before experience or research and evaluation permitted even tentative conclusions.

Our own research and demonstration project [2] has involved establishment of a Demonstration Nursery Center to provide for the daytime care of infants and toddlers in groups and for the evaluation of this experience of group care. Even before our Nursery was opened, we were being asked for reports, asked to share findings, asked to provide "all information pertaining to infant and toddler group care . . " Since early 1967 our mail bag has bulged with requests for informational materials, for advice and suggestions:

1) from departments of health, social services, human resources, etc. at state, county, and city levels concerned with licensing and/or criteria for quality programs for infants and with training of staff for consultation or for conducting programs for infants;

2) from universities and colleges establishing laboratories for infant development for research and teaching, or from researchers working with infant subjects, or from school systems planning to establish programs of continuing education for teen-age mothers and to provide day care for their babies;

3) from federal programs in the Office of Economic Opportunity or Office of Child Development: Head Start training, CAP directors and planners, Parent and Child Centers in planning or operational stages;

4) from other federal programs; for example, the Appalachian Regional Commission, Senators, Presidental Assistants, Agriculture and Home Economics Extension, etc.

5) from voluntary agencies at community and headquarters levels; for example, United Fund groups, Community Councils, National Council of Jewish Women, Jewish Board of Guardians, Catholic Charities, Junior League Florence Crittenton Homes, etc.

6) from a variety of other sources, including non-university-related research centers, hospitals, day care programs in churches, individuals, etc.

TABLE I on the page following indicates the kind of geometric progression the pattern of these demands has taken since early 1967. At times it has been difficult for our professional staff to accomplish anything other than answer the mail, conduct visitors through the Nursery, and meet requests for consultation with other programs. Table I shows that in 1969 the number of requests/inquiries was double the 1968 total. If 1970 ends as it has begun, we shall be besieged with three times the 1969 number of demands for help and materials. The 1970 figure is affected by the tremendous increase over the nation in programs for school-age mothers and by the increased interest on the part of private and philanthropic groups in moving into the area of infant/ toddler group care.

TABLE I

INQUIRIES, REQUESTS FOR ADVICE AND MATERIALS

UNC-G DEMONSTRATION PROJECT: GROUP CARE OF INFANTS

1967-1970

Source of Inquiry or Request	1967		1968		1969		1970 (Jan-May only)	
	No.	%	No.	%	No.	%	No.	%
State, County, City Depts. of Health, Welfare, and Social Services	9	27	9	22	9	12	23	16
Universities and Colleges; Public School Systems	5	15	8	20	21	27	43	31
OEO/OCD Programs: Head Start, Parent and Child Centers	9	27	6	15	16	20	9	6
Other Federal Programs	2	7	2	4	7	9	12	8
Voluntary Community Agencies	4	12	4	10	16	20	30	21
Others: Research Centers non-university-related; hospitals individuals, etc.	4	12	12	29	10	12	25	18
TOTAL	33	100	41	100	79	100	142	100

We are far from meeting adequately the insistent need for materials, guidelines, and specific descriptions of experience with staff training and with daily programs for infants. In the first phase of this Demonstration Project we were encouraged by our grant agency to devote our major attention to the problems of establishing, operating, and evaluating the day care center and to defer, for a time, efforts that would emphasize a staff training component. PHASE II of the Demonstration (1970 - 1973) will focus on the production of training, educational, and interpretive materials relating to infant/toddler care. PHASE II will also involve an evaluation of the development of babies in group care compared to those in day care home situations.

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II. ESTABLISHING AND OPERATING A CENTER FOR THE CARE OF INFANTS AND TODDLERS

In this section we shall give a descriptive account of our experience with the "founding" of a Center and with its operation over a three year period. We shall attempt to be concretely helpful by describing problems we encountered, costs, staffing patterns, and requirements of space and other aspects of housing.

Housing and Outdoor Play Space

Finding suitable space for a center is a first requisite. Decisions regarding equipment, staffing patterns, age-level groupings, and even program must wait upon the acquisition of suitable housing and outdoor play space. Local zoning, sanitation, and fire regulations must be taken into account in the search for housing. An additional important consideration is accessibility to the families to be served, for infants and toddlers should not have to be transported daily over long distances by bus or car.

In our search for a "home" for our Nursery Center, we also wished to be on or near the University campus, and we wanted our staff to find bus transportation convenient to the Center. And, because this was to be a demonstration/research project, we knew we would need space for observers and other visitors.

Our hope was to find a large house that would offer a "homelike" atmosphere, afford sufficient space and at the same time comply with all local ordinances. This soon appeared an impossible hope. When further search produced nothing acceptable on the University campus, we turned to a nearby church that had recently built a new

education wing. This new wing conformed to all city ordinances and afforded beautiful space with large, well-lighted, air conditioned rooms on the ground floor and a kitchen and dining area on the second floor. The latter was used by the church only on Sunday nights and very occasionally on week nights. The church appointed a committee to confer with our staff in working out all details of the arrangement. These were later formalized into a kind of working agreement [3] that has been up-dated each year, revised as needed, and then signed by the University Business Manager and by the Chairman of the liason committee from the church. These basic understandings in writing plus, on both sides, liberal portions of goodwill and willingness to make compromises, have resulted in very pleasant working relationships and have meant extremely attractive housing for our program.

The disadvantages of sharing church property are perhaps obvious, the most serious one being the need to put away on Fridays and to get out again on Mondays everything that is not intended to be shared with the church. There is the inevitable sense of not having a permanent "home of one's own."

A further problem that we did not forsee relates to the matter of outdoor play space. In this age of the automobile, churches are found to have ample black-top parking facilities with very limited tree-shaded, grassy areas surrounding their buildings. In our case, we planned to use a covered portico for outdoor play. We soon discovered, however, that it was too dangerously near the street; also, after we added a group of three-year-olds, it was simply inadequate in over-all

square footage. It took more than a year of negotiating with neighboring property owners and, finally, the church, before we obtained some space that we considered desirable --- grassy, shaded space on the far side of the building. At that point in time, we had no funds for fencing. The church arranged to install the fencing and ultimately recovered this considerable investment through our rent payments. Our play yard still leaves something to be desired, since we must cross the parking area to reach it. The ideal arrangement, as seen by our staff, is to have each playroom open directly onto the playground. We suspect, however, that not many centers achieve the ideal in this respect.

Staffing

The observation has been made that in staffing of day care programs for young children, everyone may be considered an amateur. There is indeed no professional training specific to the field of day care, and professional practitioners in the field are today drawn from a variety of disciplines: social work, nursing, child development, early childhood education, psychology, and so on. In the field of infant/toddler group day care, there is no doubt that we are all novices. We must "make do" with what we have at the moment in the way of training and professional backgrounds, adapt and revise, as we attempt to build this quite new, necessarily trans-disciplinary field of service to children and families.

Our first efforts at building a staff for the project were directed toward hiring a director and an associate director for the

Nursery Center (in 1967, yet to be established) and toward engaging a local pediatrician as consultant. (We were also concerned from the outset with employing a research director for the evaluative component of the project; a detailed description of the research effort is reserved for a later section. (See Evaluation, pp.38 ff.)

The Director of the Nursery Center brought to the project a background in early childhood education and child development; our Associate Director was a psychologist, her value to the program enhanced by the fact that she was also the mother of two young children. Our consultant on medical/health questions was a local pediatrician who confessed to having serious reservations about the wisdom of taking infants into group care. She was sufficiently intrigued with the challenge of the idea, however, that she agreed to give us four hours per week of consultation during our first year of planning and operation.

During the first six weeks the Nursery Center was operating, we had the services of a highly experienced Nurse-Teacher with a Master of Science degree in Nursing. Later we employed a young nurse who had the Associate Degree in Nursing plus experience in pediatric nursing at a local hospital. She remained with the project for two years. The Nurse currently on our staff has had four years of public health nursing experience beyond the Associate Degree.

Beginning with our second year of operation we hired a professional nursery school teacher on a part-time basis (mornings) to work with our three-year-olds --- children who had been in the program during the previous year and whom we wished to follow closely for

another year. Also, after the first year, when we began to enroll children from low income families, we arranged with a social worker for some consultation time. We have made use of her services more for consultation with staff than for work with client families, but she has been extremely helpful both to staff members and to certain of our mothers.

This, then, is the roster of our professional staff as of 1970: we have a full-time Director (but now no Associate Director: when our first Director left in June 1969, the Associate Director moved up to the Director's position and was not replaced); a Nurse-Teacher, full-time; a part-time Nursery School Teacher for the three-year-olds; a Pediatric Consultant (generally one hour per week plus on-call availability); and a Social Work Consultant (the equivalent of 20 half-days during the year).

One of the first tasks the professional staff assigned itself was the writing of job descriptions [4] for staff that would have primary responsibility for the daily care of the babies and for those that would be the "facilitators" of the entire operation: nursery assistants, bookkeeper/receptionist, cook, janitor, etc. After these positions had been classified by the State Personnel Office, we were ready to hire this staff.

Three community resources proved to be a tremendous help in recruitment: the Employment Security Commission, the Guilford County Home Economics Extension Service, and the Student Aid Office of local colleges and universities. After we had a nucleus staff, we had

new staff from the persons then working with us. Recruitment has never been a problem and we have had a minimum of turnover in our three years of existence. Whatever success the program has had may be attributed in large measure to the enthusiasm and loyalty of the para-professional staff and to their ability to work harmoniously together for the best interests of the babies and their families.

We have tried to document our first experience with recruiting, orienting, and training our para-professional staff in a booklet entitled, Learning and Teaching in a Center for the Care of Infants and Toddlers.[5] Much remains to be learned about identifying the personal qualities that underlie success in a program of infant care and about defining the content of both the formal and informal training needed for this and similar efforts.These "discoveries" are to be the focus of PHASE II of this project and the subject of study/research by graduate students at the University, during the coming year.

Equipment and Supplies

Our experience with the initial equipping of the Demonstration Nursery Center was recorded in a suggested list of equipment and reproduced in mimeo form as an aid to others undertaking similar projects. In early 1969 that list was revised and updated. The revised list[6] takes into account what we had learned in those first two years about "best buys," "worthwhile investments," and so on.

Cost Figures

The actual monetary cost of a program that gives individualized care to babies is inevitably going to run high, chiefly because personnel costs form such a large part of the budget and there are few ways these costs can be reduced. We began our project with only an "educated guess" about the ratio of adults to babies that would assure quality in the program of caregiving. We "guessed" that we would need one adult for each four babies under two years and we operated for more than a year carefully maintaining this ratio. As the para-professional staff has become more experienced, the parents more confident about our services, and the professional-administrative-research staff more convinced that the babies were indeed thriving in the setting, we have felt comfortable about raising that ratio. We now maintain a ratio of one adult to each five babies under 18 months; one to six around two years of age; and one to ten three-year-olds. We would emphasize, however, that there are extra "hands" usually available (the Director, the Nurse, often a student assistant) to help a Nursery Assistant at some busy moments --- feeding several children at once, getting ready for outside play or walks, any emergency, etc. --- and to relieve her at her break-times and lunch time. We never leave our babies alone in a room even when they are all sleeping. The staff working hours are staggered, since the Nursery is open for ten hours daily and no staff person works more than an eight-hour day. This must all be taken into account in calculating staff-child ratios and in inspecting budget figures for day care personnel.

Infant/toddler care of high quality --- individualized, as a baby would experience in his own home or in a day care home --- is not inexpensive, and it is hard to see how it can be made so by any substantial budgetary cuts. Volunteer assistance, as a way of cutting staff costs, is going to be a solution only if the same volunteers come every day --- or if the Center gives up on the effort to provide continuity in caregiving persons. We are quite unwilling to do this in the present state of our knowledge of what constitutes a program that meets as many of a baby's needs as can possibly be met in a group setting.

The observation is frequently made that the difference between a quality program and a mediocre or poor program is directly related to the training and skills of the director of the program. To economize here is to cut sharply into quality. However, an experienced and well-qualified director can probably administer a center enrolling 30 or 40 infants and toddlers as effectively as one enrolling 15 or 20. Here then is one way to lower the cost per child per year --- provided the center has space for small groups to be kept together with one caregiver. We believe that five or six children grouped together in one room with one caregiver is infinitely preferable as an arrangement to grouping 10 or 12 babies together in a much larger room with two caregivers. It must be admitted however that this is personal preference based on our own experience and observations and is not supported by "hard" research evidence of any kind.

In response to many inquiries, we have prepared some figures showing the actual cost of service similar to that given our babies. The cost analyses and prototype budget on the pages following are prepared as guidelines for persons or agencies needing some clues to the costs involved in infant group care. They include none of our research costs, consultants' fees, nor the administrative/secretarial/ publications costs of our program. The figures may be taken as guidelines not for a demonstration-research project but for an agency or individual enterprise where quality service to babies and their families is the objective.

PROTOTYPE BUDGET FOR INFANT CARE CENTER*

[All-day Care, 50 Weeks Per Year]

PERSONNEL	Approximate Annual Rate
1. Director (Professional, with background in child development, psychology, nursing, nursery education, etc.)	$8,000. - $12,000.
2. Nurse/Teacher (Full-time, if Center maintains Sick Bay)	$6,000. - $8,000.
3. Nursery Assistants (Caregiving staff working 8-hour day in center open 10 hrs. daily; assign one adult to each 5 babies under 1 year; one adult to each 5 toddlers between 12 and 24 mos.; one adult to each 8 children between 24 and 36 mos.)	$3,800. - $4,500.
4. Cook (full-time)	$4,000. - $5,000.
5. Janitor/Maintenance (part-time)	$2,000. - $3,000.
SUPPLIES	
1. Supplies: office, medical cleaning, disposable paper/ plastic, etc.	$1,200. - $1,400.
2. Food (including milk; plan $.50 per day per child and per adult served; parents supply infants' formulas)	(depends on number enrolled and size of staff)

*This budget provides guidelines only, is intended to draw attention to the major items of cost of operating a center that provides a quality program for infants and toddlers.

(continued)

SERVICES	Approximate Annual Cost
1. Telephone, per month, may range $8. - $30.	$96. - $360.
2. Diaper service (plan $3.00 per month, each infant under 2 years)	(depends on number of children in diapers)
3. Other Laundry (per month, plan $2.00 per child)	(depends on number of children enrolled)
4. Liability insurance (optional; approximately $10. per year per staff member covered; $5. per year per child)	(optional)

EQUIPMENT	
(Including furniture, toys, linens, bedding)	
Initial outlay	$2,000. - $3,000.
Replacements, per year	$1,000. - $1,500.

HOUSING/RENTAL	
(negotiable; may have rent-free quarters or pay monthly rental up to $300. or $400.)	$000. - $4,800.

NOTE: Figures are based on experience of operating a center in Greensboro, North Carolina (population 140,000). In April 1970, the Cost of Living Indicators (American Chamber of Commerce Researchers Association) placed the city at 106.7. In these reports, Greensboro is usually at or near the national average of 100. Thus, in some geographic areas of the country, costs will run higher, in other lower than the figures given above.

Savings could be effected in a number of ways: some equipment could be donated; use of surplus commodities, food stamps, etc. would lower food costs; a cook might manage on part-time with volunteer helpers; a washing machine would cut laundry costs; a diswasher would reduce use of disposable supplies; rent-free housing could be negotiated; the nurse could work part-time and/or serve several centers or day care homes.

A CENTER FOR INFANT/TODDLER CARE

ESTIMATES FOR OPERATING*, PER YEAR

A Center for 20 Infants and Toddlers

Personnel	$39,000.
Supplies (including food)	4,700.
Services	1,200.
Equipment	1,000.
Housing	2,500.
	$48,400. TOTAL

Per child cost per year . . . $2420.
Per child cost per week . . . $48.50

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A Center for 30 Infants and Toddlers

Personnel	$47,000.
Supplies	6,000.
Services	1,700.
Equipment	1,500.
Housing	3,000.
	$59,200. TOTAL

Per child cost per year . . . $1,973.
Per child cost per week . . . $39.00

* Fees may be assessed on a sliding scale from $1.00 per week to $30.00 per week (or more).

PROPORTIONATE COSTS OF VARIOUS COMPONENTS OF THE SERVICE

(Group Care for 30 Infants and Toddlers)

	Dollar Costs	Per Cent of Total Cost
1. ADMINISTRATION (1/2 Director's time)	$5,000.	.08
2. PHYSICAL FACILITIES (rent, telephone, cleaning and maintenance, 1/3 supplies)	$5,500.	.09
3. HEALTH (1/2 Nurse's time, laundry, 1/3 time of each assistant; 2/3 supplies)	$13,900.	.24
4. CARE AND EDUCATION (2/3 time each assistant; 1/2 Director's time, 1/2 Nurse's time)	$24,500.	.42
5. FOOD (food and cook's wages)	$8,600.	.15
6. EQUIPMENT	$1,500.	.02
TOTAL	$59,000.	100

III. CHILDREN, FAMILIES AND THE PROGRAM

The Children and Their Families

In 1969-1970, the Demonstration Nursery Center had 31 children enrolled. Eleven of these were three-year-olds, all but four of whom had been with the project since before they were one year old. Twenty were two years of age or under, and of these 20, ten were under one year of age. About one-fourth of the group (8 of the 31 children) were from low-income families, being children of a few young student couples struggling to "make it" without parental assistance, the others coming from families where the mother alone (or a grandparent) was working to keep the family together with incomes from low-paying jobs.

In initiating our project we had proposed --- for reasons related to our research objectives --- to enroll children exclusively from middle-class families. We later became convinced that our Demonstration would have wider applicability if we gained experience also with lower-income working mothers and their infants. The rationale for a largely middle-class oriented demonstration has some validity. If the objective is to investigate whether care of infants in groups is or is not detrimental to development, and if the comparison group is to be infants in their own homes, then a good group experience must be compared to a good home experience. It would doubtless be relatively easy to show that babies in care in a quality group program developed as well as or more satisfactorily than babies in a poor, "deprived" home environment. But what would this "prove?" Not very much about group care for infants.

We certainly are not saying that all low-income homes are "depriving" even if in a financial sense they are "poor." However, we were searching for a comparison group that could be considered as "favored," as "stimulated," and as "advantaged" as the group having in the Nursery the best program we knew how to provide. We also knew that for research purposes we required a stable population, not too mobile, one that would remain with us and stay interested and supportive over a period of years.

We are aware that in focusing chiefly on middle-class families we have perhaps alienated ourselves from the mainstream of social programs in the United States today. The emphasis --- particularly in government and foundation supported programs --- seems to be on "poverty," on "the disadvantaged," on the "deprived" child. This is salutary and extremely crucial to the improvement of life in this country. We need to bear in mind, however, that it is the middle-class mother who presently is the largest "consumer" of day care service, a service for which she herself pays. Further, our society is greatly in need of her services and puts considerable pressure on her to join the labor force even when her children are in infancy.

Models for the Program of Caregiving

In designing the model for our daily program at the Nursery we again felt ourselves to be novices in a field that offered few guides, few descriptions of experience. True, in the 1920's Harriet Johnson was writing of an all-day group program for toddlers (14 months and older) in her Children in the Nursery School and in School Begins at Two. Access to

Louise Woodcock's Life and Ways of the Two-Year-Old also helped us to feel not-quite-amateurs in the undertaking. By 1967, Bettye Caldwell was formulating, for programs like ours, some assumptions about the framework for the daily program of a Children's Center.

The collective personal and professional experience of our staff led us to choose two models as a basis for planning our program of care-giving, day by day. We chose the good home and the good nursery school as models and tried to define how their strengths contribute to the development of a baby or toddler. Hence we asked ourselves: if our babies, instead of spending six to nine hours a day in the Nursery Center, were at home with their mothers, what kind of "good life" might they be enjoying? And we came up with some such answers as the following. They would be with persons to whom they are of tremendous personal, individual importance, with persons who notice what this baby is like, who observe ways in which he/she is different from any other baby they have known, who care about what he is learning, and who have discovered much about how to keep him comfortable and contented. He would be with people who lean over his crib and smile and talk to him, or babble in response to his babbling; who tirelessly retrieve toys and play pat-a-cake and peek-a-boo and other games dear to babies and adults; who sing to him and rock him; who feed him when he is hungry and come to change his position when he is irritable or bored; who provide him with suitable toys and occasional playmates; who communicate enormous delight over his developing skills of creeping, standing, walking, adding words to his vocabulary; who encourage his mastery of the techniques of self-feeding and dressing and support his coping with

the mysteries of bowel- and bladder-control. He would be living each day in a setting where people watch for the kinds of things that "turn him on" --- toys, talk, words, the chance to explore the kitchen, the "messing" in things, the clowning of brothers and sisters, the romp with daddy --- and, when he needs time alone, give him "moments of peace." He would be with people who are sensitive to his need for reassurance and comfort and who are not uncomfortable when limitations and frustrations and reproofs are in order. He would be living a life that suits his particular temperament and his age; a life that has more order than chaos, more encouragement than scolding, more color and action than blandness. Can the essence of such complex experience be provided also away from home and family? We have searched for ways to do just this.

There is available also as a model for "the good life" the well-functioning nursery school, designed sensitively to meet the developmental needs of the very young child. The field of nursery education has much to contribute to any model for group care. The skillful nursery school teacher has techniques for tempering the stimulation of group life to a level that the young child can tolerate with ease. Her training gives her a deep respect for the child's tie to his mother and family and encourages her to plan for a gradual transition from home to group life. The sensitive teacher has a working understanding of the young child's need to live and grow in an atmosphere of warm encouragement and benevolent support as he learns to li with age-mates and to cope with the complexities of interpersonal relationships. She has a lively enthusiasm for age-appropriate play equipment, songs, stories, and books.

A professionally trained nursery school teacher has a profound respect for the learning possibilities inherent in "free play" in a well-equipped, orderly, protected setting. And she has long been convinced that mothers and their children remain better friends if they need not be constantly together and if the child can relate to other adults --- warm, patient, flexible, non-punitive --- that he and his mother like and trust.

Our model for "the good life" further requires that the infant's mother and father be committed to the plan they have made for supplemental daytime care and feel that it is wholly satisfactory as an arrangement for their baby and for themselves. Closely tied to this satisfaction is a workable plan for the baby's care at those times that he suffers minor illness. Parents need a dependable arrangement and the baby needs to be in a familiar routine with familiar caregivers. A commonsense assumption could be made that both duration and severity of illness in young children could be reduced by competent nursing care in the very early stages of illness. If a mother need not worry about missing time from her job, she will readily cooperate in reporting to the caregiver symptoms she has observed and thus a child's illness may be "caught" and treated in the early stages. Quiet play, extra rest, warmth and stable room temperature, controlled humidity, meticulous administering of any medication, the familiar and favored caregiver to provide an interesting waking time, all contribute to the baby's recovery and to the mother's comfortable assurance that he is being well cared for.

What these models of sensitive caring for, caring about children look like when transposed to a group setting designed for day-long living with infants and toddlers is described in considerable detail in "The Good Life" for Infants and Toddlers.[7]
In practice the models lead to:

1) careful planning with the parents for a baby's transition from home to the Nursery and back home at the end of the day
2) continuity in care for each baby; one "in-charge" caregiving person who knows well the baby and his requirements
3) care of planned consistency
4) pride, pleasure, and enjoyment on the part of staff in each child's special qualities, developing skills, readiness for new experience
5) feelings of "belonging together" -- caregivers and babies, babies with their age-mates
6) individual attention, cuddling, "talking to" at feeding time, diapering time, play time
7) toilet training undertaken by the child's favorite caregiver, when staff and parents agree the child is ready
8) meticulous concern for health care and protection/prevention
9) provision of a Sick Bay at the Nursery to permit children with minor illnesses to attend regularly
10) a play environment that "turns children on" --- well-equipped, orderly, protected, challenging, age-appropriate
11) parents as partners in planning and as the important and responsible figures in the baby's life

Parents and the Program

One of the first questions we are asked, after the program has been described or observed, is: "But don't the mothers feel terribly competitive with the staff people who get to spend so much time with their babies and become so important to them?" In actual fact, the problem of rivalry and jealousy among the adults has not been observed, and we have been intrigued to search for answers as to why this should be so. Such problems obviously have many roots, and simple explanations do not suffice.

Mothers who feel relatively unambivalent about gainful employment, about the importance of the work they are doing, and about the plan they have made for child care during their working hours, are likely to get on well with those who are taking care of their children. Mothers whose love for their children is healthy and generous will experience real pleasure when other significant adults show interest in the children, skill in their management, and affection for them. And when they see their child is happy, they feel grateful to the persons who contribute to the baby's well-being. One of the mothers in our Center whose baby daughter entered at eight months of age, wrote us a year later:

> "... It is always hard to place your child in a day care facility ... you wonder if anyone will take the time and interest to do a few of the 'little things' your child is accustomed to. After Jennie's first day I knew not to worry. The Nursery attendants were telling me some of the things about Jennie I was not aware of.

> We became aware of the deep affection that the Nursery attendants had for the children as well as the devotion of Jennie for Miss J--- and Mrs F--- ... and finally dear Mrs. P---. There cannot be a nicer feeling than to have your child run eagerly into nursery each morning. You know that the days must be good ones for her ..."

Again and again, parents communicate to us their pleasure in the staff's love and concern for their child:

> "... We like having our child cared for by people who are constantly learning more about child behavior and who are aware of his physical and emotional growth, and accept him as an individual. We like the age grouping, the enrollment per teacher, the relationship between teacher and child, the daily record sheets which are kept on the children, nurse on duty, the genuine concern and love your staff has for each child ..."

> "... the very obvious interest and concern which is apparent in every member of the staff for the welfare of the children is the most important positive feature of the nursery program ..."

> "... May we say a special thanks to Mrs. H--- and Mrs. R --- whose unique ability with young children made every day at school an exciting adventure for Debbie. Their expert guidance and genuine affection will always be treasured ..."

More than once, and especially on the part of our very young parents, we have seen evidence of a deep trust in the caregiving (para-professional) staff. Parents sometimes inquire whether the caregiver would be available and willing to care for the baby on week-ends or when the parents must go out of town. Quite frequently these caregivers are asked for advice on the baby's sleeping, eating, and other routines

On two occasions in the past years we have asked mothers and fathers to write brief, informal notes to us about their reactions to Nursery group care "as a form of upbringing for babies," to tell us how

they view the experience their child has had, his general development and progress as the Nursery has contributed to that (or perhaps retarded it).

In addition to expressions of pleasure in the affectionate ties the children have developed with staff, also frequently mentioned are: the provision of a wide variety of play activities, the opportunity for social growth and contacts, and the encouragement of independence.

The following are excerpts from some of these evaluative notes. Names are fictitious. It must be obvious that these are parents (and grandparents) who have a heavy investment in their children's well-being and development. These are not the expressions of persons who have abdicated their responsibilities for their children by placing them in day care.

> "... The nursery has helped Artie to become quite independent. I feel that he has learned to do some things earlier than he might if kept at home --- weaning from his bottle, feeding himself, etc. It has helped him in learning to play with other children and to take care of himself..."

> ""... The wide variety of play equipment and activities has been more than any one family could ever provide and has fostered Marjie's development more than I could, ever. This has promoted growth in: (1) Marjie's interaction with other children and adults -- for example, taking turns, sharing, conversation. (2) Accurate and large vocabulary. (3) Early knowledge and use of manners - for example, she practices common courtesy and respect for others without always being told. (4) Good dexterity and physical skills --- she has learned to dress and undress herself much earlier than I anticipated. (5) She has had an opportunity to learn and appreciate nature, music, stories, etc. The Center has allowed Marjie freedom and encouragement to proceed at her own learning rate. Many times she has learned things I did not realize she was capable of at her age. Life has been full of surprises every day. Since she is a first child I do not think I would have known to allow her the freedom she has experienced. The consistent and fair discipline at school has made discipline at home easier ..."

"... Having had Kenny enrolled in the Center one year I can truthfully say it has helped him in meeting and communicating with people. When we are among friends he knows how to play and share. If we had kept him home I don't think he could mix as well with people. Also I feel that children learn from each other and I know he is happy there. All I have to say to Kenny is are you ready to go to nursery and he gets his coat ..."

"... We are not aware of any ways in which his development has been retarded and on the contrary feel that he has learned a great deal, as well as having fun. Some of the principal benefits we have noticed are: (1) ... he is neither shy nor show-offy, but seems to take new faces in his stride. We have privately made the same comment about other nursery children. (2) He has enjoyed a greater variety of toys and more space to run around in than we could have offered him. (3) He has always seemed eager to make each transition to a more grown-up way of doing things; we suspect that seeing slightly older children in the nursery has helped him to accept these changes ..."

"... We both feel that the experience has been tremendously beneficial to Bobbie in many ways. Most important it has given him the opportunity to play and grow with other children. At home he would have been alone with me most of the time. Incidentally, we have been very pleased too that the nursery presented Bobbie with a perfectly natural integrated situation. He seems not to have perceived the difference between black and white people, but when he does he will have his own personal relationships to draw upon in developing understanding."

"... Some of the things I have been most impressed with and thankful for at the Center include: the concern for all children's health and safety. I can recall one time when Elaine ran a very high temperature. I know that I would not have felt as easy about leaving her anywhere else or in another person's care, at home or in a group situation. I think the sick bay has been good to have for the small children. Sickness is inevitable but in most employment situations, one still has to be on the job...Elaine has experienced many changes and adjustments in her life. The people at the Center have been sensitive to her needs during these times. They have also been helpful in helping me to be sensitive to her needs ..."

One mother who is also a member of the staff concluded her note with these comments:

> "... I perhaps have an added advantage over most of the other mothers in that I am a part of the Center five days a week. I think that the best way I can explain my deep admiration for the Center is this ... Most any center can look good on paper -- or for visitors -- even for parents. But, a center that functions daily internally as it says it does on paper, for visitors and parents --- well, that's what you have here. It's beautiful to see! And I can never thank you enough for allowing me to be a small part of it. And I especially thank you for giving Nancy the opportunity to grow and learn in an atmosphere of love and patience..."

To return to the question of rivalry between mothers and caregivers, we have speculated about whether our devotion to the model of the mother's care at home has not been a factor in producing some of the positive feelings. Our effort is obviously not to adapt the baby to the Center's routine but rather wherever possible to modify the Center's care to fit parents' preferences and practices.

One perceptive psychologist has suggested too that, as we have never sponsored "PTA-type" meetings with the parents, we have never given them the uncomfortable feeling that "the Center knows best." Too frequently in our culture, the orientation to a parents meeting is: "...let us tell you how to do a better job with your child ..." or: "...oh, now we'll hear how the experts manage everything so easily ..."

What kinds of contacts do we have with the parents of our children? For one thing, since we do not provide transportation we see one or the other parent twice each day. This makes possible frequent casual contacts that can be reassuring and supportive rather than anxiety-provoking. These daily times-together involving parents, staff and baby

are seen as times for getting better acquainted, for enjoying one another, not for teaching-and-telling, and it is on these occasions that the spirit and the quality of the Nursery Center is best communicated. Also, small matters can be dealt with --- on both sides --- before they loom as large matters.

At the end of the day, the parent has access to the "Daily Care Sheet" that has been kept by the baby's caregiver and that includes not only reports on routines (eating, naps, stools, etc.) but also indicates the day's highlights of outings, play, and the practising of new skills.

Conferences with the parents are scheduled whenever parents or staff believe that the child's welfare would be served by an opportunity to talk together at some length, uninterrupted. The baby's primary caregiver joins these conferences and contributes to them as the person who knows the baby best in the out-of-home setting. Frequently these conferences are scheduled at the lunch hour and take place at the Nursery, with both parents invited to be guests of the Center for lunch. Discussions then take place over lunch, and afterward.

Our initial contacts are designed: (1) to orient the parents to the services the Nursery Center can offer them and their baby and, more importantly, (2) to learn about the baby and about the parents' view of their child and his needs. The parents are questioned about details of his/her care at home so that the Center can duplicate that care in as many ways as possible. To confirm the former, the parents are given a small booklet, A Summary of the Essential Understandings between

the Demonstration Nursery Center and its Patrons.[8] To make specific the latter, "cue cards" are prepared as a guide to the caregiver for the baby's first days/weeks in the Nursery. These cue cards are modified as the baby develops, usually as a result of the casual morning/afternoon interchange between parents and staff.

Problems: Anticipated, Not Anticipated

From the vantage point of three-years-later, our staff can look back on some early misgivings and anxieties and see that they were groundless. We can also identify problems that had not been anticipated and that at one time or another in this three-year history loomed large.

First, we may sketch briefly those developments we had not anticipated as problems.

The matter of adequate outdoor play space has already been discussed (see Housing and Outdoor Play Space, pp. 7-8).

Certain problems that center about the provision of food were not anticipated. It is far from simple to plan menus and prepare food suitable for a group that ranges in age from adults of 50-plus years downward to infants of ten months just moving to table foods. In a program where adults work hard at the physically and psychically demanding job of caring for young children over an eight-hour day, favorite foods attractively served become crucial morale-builders. Essentially that same menu must be appealing to the very young and be adequate nutritionally for children who may need to receive two-thirds to three-fourths of their daily nutritive requirements away from home in the Nursery Center. Quite aside from nutrition are other considerations --- provision of "finger foods," serving the types of foods that assure some success in self-feeding, offering a variety of foods to encourage an interest in and acceptance of new foods, without excessive waste that distresses the cook as well as the accountant.

A third problem arose because our initial plans had not involved enrolling three-year-olds. When we decided to add a group of threes we were faced with the problem of suitable and convenient toilet facilities for those children. It is possible with toddlers to use pottie chairs and not to insist on toilet facilities connecting with every playroom. The threes, we felt, must have access to "real" toilets. Ultimately we worked out an arrangement with the church for our threes to have the use of an adult "Ladies Room" farther along the hall, the church agreeing that no church employees or visitors would use this particular facility during the week. We had some sturdy platforms constructed around the toilets and wash basin so that our threes could manage the routines there with a minimum of adult help. The arrangement has worked but it has been far from ideal.

We had anticipated that staff turnover and recruitment might be a major problem, since salaries were low (entering salaries are set by the state at minimum wage levels for our auxiliary staff), tenure not guaranteed, and fringe benefits somewhat limited. We had considerable anxiety that frequent turnover would compromise our efforts to provide continuity and consistency in care for each baby, resulting in a "multiple mothering" pattern that required the babies to adjust to a number of differenct adults over a period of a year. In actual practice, this has proved the least of our problems. Our twos and threes still spend the daytime hours with persons they have known literally all their lives. Visitors who came in the early months of the project are surprised, on return visits two and three years later, to meet the same staff (as well

as the same children). Clearly, our staff are finding many satisfactions in the work, and sagging morale has at no time been a problem to us. Apparently this para-professional staff have the conviction that they are doing important work that is making a contribution not only to our children here but also to others in many places over the country. Frequent visitors who show obvious interest and enthusiasm for the quality of care given the babies, reinforce this belief of the staff. Perhaps most important of all is the covert sense of trust and the subtle evidences of approval on the part of professional staff for the performance of the para-professionals.

A second area of anticipated difficulty that never materialized relates to the problem of toilet training. Both professional and auxiliary staff seemed acutely aware of the responsibilities faced in this matter by anyone who undertakes the full-time care of toddlers. Questions were raised and concern expressed repeatedly during pre-service training, and frequently by prospective staff during the initial interview and/or orientation weeks. Our actual experience has been, however, that other, slightly older children have carried the "burden" of this training, and that the role of the adult has been simply to support the toddler's natural inclination to identify with an admired older child in the learning of a new skill. Indeed, we are inclined now to Erikson's view that toilet training, rather than constituting a trauma to be suffered inevitably in toddlerhood, is in fact for the child one of the dramatic achievements of this stage of development.

In the early stages of planning and operating the Center, we found it difficult to conceptualize the situation we would face in the matter of illness and other health problems in the group. Our pediatric consultant, Dr. Ford, in helping us plan our space needs, attempted some predictions based on experience with her own patients in other group care arrangements. She expressed the fear that there might be days when a substantial proportion of all the children would need to be in Sick Bay. She had considerable anxiety about a high incidence of diaper rash and skin infections, and prepared us for gastro-intestinal and upper respiratory infections of near-epidemic proportions at certain times of the year. Other programs similar to ours had experienced frequent illness of staff members exposed to so many different babies and their families. Our actual experience has been considerably more cheerful than the predictions. Three babies is the maximum we have ever had in Sick Bay on any one day, because we have found it safe to isolate infants (under 12 - 15 months) in their cribs with their own caregivers in their own rooms. By far the greater proportion of the time, Sick Bay is empty or it is used a few hours in mornings for observation of one child by the Nurse. The Nursery Center gives the impression of a place filled with healthy, not sickly, children. We have had nothing that could be considered an epidemic. Diaper rash has been a minor problem, though our payments for diaper service have been substantial. (A more complete and quantitative description of our health record is contained in the section on EVALUATION, pp. 38 ff.)

In our first planning for the Nursery, we had recognized the need for making some provision for privacy for our babies, for offering them chances to be alone and to play undisturbed, to have quiet moments protected from the constant stimulation of a group. We thought this was probably important but we were not certain whether or how privacy could be achieved. As time went on, our staff worked out a number of ingenious solutions. They have used folding screens to surround cribs, have moved toy/book shelves to enclose quiet corners for solitary play or for sleep, have even used large cartons or a sofa to barricade a play or nap space for a child. Our babies and toddlers are allowed ample time to waken from naps and frequently play quietly in cribs for some time after awakening. The two-year-olds have a playpen in their room that is used as a "retreat." If a child wishes to experiment with a toy or look at a book undisturbed, he climbs into the playpen with it, relying on his peers' respect for the unwritten law that he shall remain undisturbed as long as he occupies that space.

In common with other research projects that involve longitudinal contacts with subjects, we shared a concern about attrition, particularly of control subjects. Our "Home" families were offered nothing except occasional snapshots of their children in exchange for access to the babies for testing on a quite rigorous schedule, for cooperation in telephone interviewing, and for the effort to bring the children to the Center for periodic examinations by the Project pediatrician. In our anxiety about whether these families would "stay with us" we had underestimated parents' deep interest in their children as well as the intriguing quality that an ongoing study would have for them when their children had an important part in it. The fact that one of our testers has been with the project

from beginning to end and that another has been with us for more than two years has also helped. The testers have made every effort to suit parents' convenience in arranging for tests and this has certainly been a factor in maintaining cooperation and enthusiasm on the part of comparison-group families. Control subjects have consistently stayed with the project, and even after two families moved from the city, they arranged return visits to help us keep to our program of testing and examinations.

IV. EVALUATION

This section was prepared
by Frances Dunham, Ph. D.,
Research Director in the
Demonstration Project

Rationale

The purpose of the evaluative part of this project was to demonstrate whether or not there were any deleterious effects of group care on infants. This is not an easy task; although many people object to the separation of mother and infant, few have attempted to show the effects of such separation. Furthermore, separation is almost inevitably confounded with variables such as stress in the home, lack of a consistent caretaker, or illness of the child. In contrast and in spite of complaints about the lack of research on the father's influence in the development of a child, workers in that area have become increasingly sophisticated in their methodology for investigating the effects of father absence per se, independent of other potentially harmful influences.

Earlier writers described babies as suffering physical, mental and social retardation when deprived of mothering (particularly if they were institutionalized); for a review of the literature of that era, see Bowlby (1951). More recently, there have been attempts to specify and investigate all of the independent variables (such as amount, length of, and reason for separation, stimulus deprivation, multiple mothering, amount of caretaking) which might produce harmful effects on an infant. For a review of the more recent literature, see Yarrow (1964). The

dependent variables continue to be rather global ones: psychopathic personality and shallow affect in later life; apathy and developmental retardation in infancy.

The babies in our Nursery Center are not comparable to Spitz's (1945) institutionalized babies in that they see their parents mornings, evenings and week-ends and they have much stimulation during the day. However, for the sake of research argument, we might consider them to be located on some comparable continuum since they are partially separated from their mothers and have some multiplicity of caretakers. The fear of professionals and laymen alike is that such separation, no matter how good the alternative arrangements, will have an adverse effect on the very young child.

There are two studies on infants and toddlers (Gornicki, 1964; Heinicke, 1956) in day care which dispute such a position; those children showed few or no such ill effects. Interestingly, other relevant literature points to the possible advantages of day care over home care. Nursery school attendance has been related to increases in tested IQ and to better social adjustment (Wellman, 1945; Hattwick, 1936). Again, the infants in our Center are not comparable to these groups of children because of age differences. Yet we might consider them to be located on this continuum too.

Such conflicting literature led to two problems for us. The first was that we did not know in which direction we should predict differences in behavior. We might think of the danger for the Center babies as focused in a lack of a close relationship with one mothering

figure, resulting in a sub-clinical hospitalism with signs of apathy and lack of initiative and curiosity. Or, conversely, we might suppose that the lack of such an intensive relationship would result in children with too few internal controls, children who were overly rebellious and independent. Our speculations led us to believe that almost any behavioral deviancy in the Center infants could be explained by some set of concepts about the genesis of human behavior. The second problem raised by the existing literature is that since there are no agreed-upon relationships between behavior and "underlying personality," any behavioral deviance can be interpreted as good or bad. e. g., a child's leaving his mother easily may seem 'good' if one believes that the systematic variable underlying the behavior is a sense of security. However, if one believes that such behavior reflects a superficial emotional relationship with the mother, one is likely to assign a value of 'bad' to the behavior.

We decided to measure more global aspects of infant behavior on which there is general agreement about the desirability of the behavior, aspects of behavior which are reported to be adversely affected by group care in infancy: physical, mental, motor, and social development and physical health.

Design

The basic design was one involving repeated measures on matched subjects in the experimental (Center) and control (Home) groups. Fifteen pairs of subjects, all from middle-income homes, were matched on

sex, race, age at entering the project, and somewhat less exactly on birth order and age and education of parents. For each of the measures, we predicted the null hypothesis, that there would be no difference between the Center and Home groups.

The size of the sample tested for both the Center and Home groups was larger than the 15 subjects included in this report. These 15 pairs were chosen on the following bases: both children in the pair had been in the project long enough to have been tested at least twice and an adequate matching subject existed. The matching of subjects was done by the research director prior to any knowledge of testing results on the infants. Thus, the pairs were not matched on the basis of beginning scores on any of the testing measures.

Measures

See Table 2 for a summary of the measures collected and the ages at which the data were collected.

1. Physical development. The project pediatrician performed clinical examinations on each child at quarterly intervals until the age of 12 months and semi-annually thereafter; height and weight were measured at this time. All of these examinations were done at the Center.

2. Physical health. In addition to the pediatric examination, monthly telephone interviews on a random schedule were held with the mothers about eating, sleeping, and illnesses. Only the illness data have been analyzed.

TABLE 2

Measures Used in Evaluation of the Demonstration Program

for "Home Care" and "Group Care" Subjects

Measures	Intervals
1. Physical development	3, 6, 9, 12, 18, 24, 30, 36, 42, 48 months
a. Clinical examinations by Project pediatrician	
b. Height/weight	
2. Physical health	variable schedule, averaging once per month
a. Illness and Accident Report by phone calls	
b. Mother's reports on sleeping and eating	
3. Mental development	3, 6, 9, 12, 18, 24, 30, 36, 42, 48 months
Bayley Infant Scales of Development and/or Stanford-Binet	
4. Motor development	3, 6, 9, 12, 18, 24, 30, 36, 42, 48 months
Bayley Infant Scales of Development	
5. Social development	3, 6, 9, 12, 18, 24 30, 36, 42, 48 months
a. Preschool Attainment Record (PAR)	
b. Vineland Social Maturity Scale	

3. Mental development. The mental score from the Bayley Scales of Development and/or the Stanford-Binet were used as measures of mental development.

4. Motor development. The motor score from the Bayley Infant Scales of Development was used as a measure of motor development.

5. Social development. The Vineland Social Maturity Scale and the Preschool Attainment Record (PAR), based on mothers' reports and on the interviewer's observations, were used as measures of social development.

The Bayley Scales, Stanford-Binet, Vineland and PAR were administered quarterly to the age of twelve months and semi-annually thereafter. All of these tests were conducted in the child's home.

6. A sixth area of testing with which we were less pleased, both in its conceptualization and its possibilities for statistical analysis, might be loosely called personality development. At the time of the home testing two miniature life situations were introduced to test (1) the child's readiness to separate from his mother and (2) his ability to assert himself.

Situation 1. On entering the home, the examiner who conducted the PAR-Vineland interview tried to get the child to leave his mother to come to her. A narrative account of his behavior was recorded following the testing session.

Situation 2. The examiner who did the Bayley testing aroused the child's interest in a new attractive toy. Then she attempted to substitute for it one of the child's own toys which the mother had chosen as "stale." A narrative account of his behavior was recorded following the testing session.

Results

Analyses of Bayley Mental and Motor, Vineland, and PAR scores were performed on the raw scores obtained by the examiner who had actually conducted the testing. For each matched pair for each of the four tests the following difference scores were computed: initial score difference, final score difference, mean score difference, and slope difference. A multiple analysis of variance was performed on these difference scores for each test. Table 3 contains means, standard deviations, univariate and multivariate Fs, and significance levels of Fs. Appendix A contains figures showing the curves of raw scores for each of 8 pairs of the matched sample.

Initially, the Home children had higher scores on all measures except the PAR; all differences were non-significant. At the last testing session, the Center children had higher scores on all measures. The final difference on the Bayley Mental was significant at the .02 level, the Center child's score exceeding his matched control in 10 of the 15 pairs. The final difference on the PAR was significant at the .04 level, the Center child's score being higher in 11 of the 15 pairs. The mean scores (for all testing sessions) of Center children were higher than those of the Home children on all four tests; none of the differences was significant. The slope scores of Center children were higher on all four tests (meaning that their rate of development was faster). The only significant slope difference was on the Bayley Mental Scale ($p = .03$). The Center child's slope was higher in 11 of the 15 pairs.

TABLE 3

Means, Standard Deviations, and Fs

for Mental, Motor, and Social Score Differences[a]

		Bayley Mental	Bayley Motor	Vineland	PAR
Initial Difference	Mean	1.27	0.53	0.20	-1.27
	S.D.	1.76	0.95	0.78	0.90
	F	0.52	0.31	0.06	1.98
	p	0.51	0.59	0.80	0.18
Final Difference	Mean	-3.67	-1.60	-0.47	-2.30
	S.D.	1.42	1.14	0.93	1.05
	F	6.70	1.98	0.25	4.79
	p	0.02	0.18	0.63	0.04
Mean Difference	Mean	-0.92	-0.97	-0.32	-1.71
	S.D.	1.11	0.83	0.66	0.92
	F	0.68	1.35	0.24	3.49
	p	0.57	0.26	0.64	0.07
Slope Difference	Mean	-0.48	-0.16	-0.20	-0.19
	S.D.	0.20	0.17	0.16	0.13
	F	5.61	0.81	1.51	2.15
	P	0.03	0.61	0.24	0.16
Multivariate	F	1.61	1.51	1.14	1.35
	p	0.24	0.27	0.39	0.31

a. Difference Scores were computed by subtracting the Center child's score from that of his matched Home control. Negative means indicate a superior score for the Center child.

The vector consisting of all four elements (initial difference, final difference, mean difference and slope difference) was not significant for any of the four tests.

To summarize, any differences on individual tests which were found between groups favored the Center group; these differences could not be attributed to these children's being superior initially. In reality, the differences which were found were small in absolute size and would certainly not be sufficient reason for arguing the superiority of Center care over Home care.

Table 4 contains a summary of the height and weight data. These data have not been analyzed statistically. Inspection of Table 4 suggests that differences between groups are small; if there is a trend in the data, it is that Home children are shorter and heavier than Center children.

We have repeatedly run into methodological problems in collecting the illness data. These data were collected during monthly telephone interviews with mothers. There was a list of 14 symptoms; the mother was asked whether each of them had occurred in the week immediately preceding the telephone interview. For the Center children, the nurse's daily report on illnesses was also available. After about 18 months, when the data were first analyzed, the Center mothers were clearly reporting more symptoms than were the Home mothers. Yet the nurse's daily report on the same Center children was appreciably lower than the Center mothers' reports; indeed, it was lower than the Home mothers' reports. In the fashion of typical researchers, we assumed that the mothers' reports were inaccurate, that they were overprotecting, or something of the sort.

TABLE 4

Height and Weight Data for 15 Matched Pairs

of Home and Center Children

Group	N	Mean Age (months, days)	Mean Height (inches)	Mean Weight (pounds, ounces)
H	15	Birth		7,5
C	15	Birth		7,6
H	2	3,7	23.25	12,9
C	2	3,10	24.13	11,10
H	6	6,5	26.13	18,13
C	6	7,0	27.67	18,4
H	6	9,5	27.75	20,2
C	6	9,10	27.75	20,0
H	9	12,10	29.67	22,6
C	9	12,14	29.50	22,15
H	5	19,8	33.25	27,14
C	5	18,15	34.75	25,13
H	6	24,16	34.63	28,10
C	6	23,23	34.75	28,8
H	4	30,9	36.13	30,6
C	4	30,6	36.50	30,14
H	2	36,5	38.75	31,4
C	2	36,11	39.13	34,13

The next strategy involved calling the mothers twice a week for a month, so that they were recalling only two or three days at a time. Fortunately for our biases, the Center nurse had her own child in the Center at this time. She underreported symptoms on her own child when she reported as the nurse compared to her telephone reports as a mother.

This led to a closer look at our methodology. There appeared to be two problems: (1) the nurse was recording symptoms on a form which used medical phraseology (e.g., nasal congestion instead of runny nose) and, consequently, the symptoms had to be more severe before she considered them to have occurred and (2) the nurse was not with each child constantly and, therefore, probably did not observe some of the milder infrequent symptoms. We modified the system for collecting data so that the Center caretaker responsible for each child kept the daily report and the nurse checked for the existence of any symptom which the caretaker had noted. Furthermore, the phraseology was exactly the same as that used with mothers in telephone interviews.

These data were collected between May 11 and June 11; there were 24 possible attendance days for each child and 14 symptoms or diseases were checked. Several children from these university-affiliated families were on vacation one or two weeks during the month. One child was absent one day due to illness. Table 5 shows the frequency with which each cluster of symptoms was reported by mothers alone, the nurse alone, or the mother and nurse on the same day. The mother and nurse agreed on the occurrence or non-occurrence of individual symptoms 98% of the time; they agreed on the existence or non-existence of any symptom 88% of the days.

TABLE 5

Agreement between Mother and Nurse on Illness Data for Center Children[a]

Symptom or disease	Reported by: Mother Alone	Nurse Alone	Mother & Nurse
Communicable disease	0	0	0
Diaper rash, heat rash, skin infection (including insect bites), cradle cap	30	6	32
Fever	1	0	0
Constipation	9	0	0
Diarrhea, vomiting	4	0	9
Flu, cold, runny nose cough, swollen glands	61	4	14
Ear infection	1	0	0
Total	106	10	57
Per cent of total possible symptoms reported	1.7	0.1	0.9
Days on which some symptom occurred	48	5	55
Percent of days on which some symptom occurred	11	01	12

a. These data were collected between May 11 and June 11, 1970. There were 21 children, 443 possible attendance days, and 6202 possible reports of illness.

(This seeming paradox, that they agreed more on symptoms than on days, is explained by a statistical artifact. There were 6202 possible symptoms and 443 attendance days. Thus, any discrepancy in report had a larger effect on the percentage of days than it did on the percentage of symptoms.)

There were large individual differences in the degree of agreement between any one Center mother and the nurse. See Table 6 for a summary of this data. The reports on some children (cf., #18 and #21) contributed a disproportionate share to the lack of agreement. However, there was an almost universal tendency for the mother to report more illness than did the nurse if any illness at all was reported. From our data, it is impossible to determine whether the mothers were overreporting or the nurse was underreporting or both.

The data on which degree of agreement between mother and nurse was computed were collected from all children in the Center during the month of data collection, not on the 15 Center children whose data are analyzed in the rest of this report. Encouraged by the relatively high agreement found in the larger sample, we decided to analyze the longer-term data of our matched pairs which was collected from the telephone interviews with mothers. Of course, we have no evidence to show that there would be the same agreement (or lack of it) between Home mothers and a nurse. Table 7 contains the illness data for the matched pairs of children.

The difference in number of symptoms reported was significant at the .01 level ($\chi^2 = 7.9$, df = 1). Home mothers reported one or more symptoms in 69 of the 118 weeks; Center mothers, in 90 of the 118 weeks.

TABLE 6

Agreement between Individual Mothers and Nurse

on Illness Data for Center Children

Child	Days in Attendance	Symptoms Reported By		Days of any Symptoms Reported	
		Mother	Nurse	Mother	Nurse
1	24	0	0	0	0
2	24	0	0	0	0
3	24	0	0	0	0
4	24	0	0	0	0
5	24	0	0	0	0
6	24	0	0	0	0
7	15	1	0	1	0
8	19	1	1	1	1
9	24	2	1	2	1
10	24	1	3	1	2
11	19	5	4	5	4
12	24	7	5	6	4
13	14	7	2	7	2
14	16	6	0	4	0
15	24	10	6	7	5
16	24	16	10	12	9
17	19	25	19	17	16
18	15	10	1	4	1
19	14	16	5	6	4
20	24	20	8	10	8
21	23	35	3	20	3

TABLE 7

Incidence of Reported Illness in 15 Matched Pairs of Home and Center Children[a]

Symptom or Disease	Times Reported By	
	Home Mothers	Center Mothers
Communicable disease	0	0
Diaper rash, heat rash, skin infection (including insect bites), cradle cap	41	53
Fever	17	13
Constipation	13	18
Diarrhea, vomiting	13	17
Flu, cold, runny nose, cough, swollen glands	38	67
Ear infection	6	8
Total	128	176

a. Each group had a total of 118 phone calls, a mother could report several symptoms within one week. Thus, the total number of symptoms exceeds 118 in both groups.

This difference was also significant at the .01 level ($\chi^2 = 9.33$, df = 1). Among the individual symptoms, the only two significant differences between groups were in Diaper Rash and Cold/Runny Nose. Both differences were significant at the .05 level with one degree of freedom; $\chi^2 = 5.55$ and 5.78, respectively.

In the entire number of child weeks (118) covered by the telephone interviews, only five days of absence from the Center occurred. Since parents kept their children at home in case of severe illness, it would appear that the illnesses which did occur during this period were not serious in nature.

In summary, our measuring technique for illness suggests that Center babies had more illnesses than Home babies and that the major differences were in diaper rash and respiratory illnesses. One could speculate about the mothers' differential readiness to report, etc., but for the present we are inclined to accept the two grcups of mothers as being equal in accuracy and to conclude that the Center babies had more illnesses than did the Home babies.

A rough comparison was made between our data for Center babies in the two months for which we had mothers' telephone reports and nurses' reports for the entire month and the data collected in the longitudinal Cleveland study of illnesses by Dingle, Badger, and Jordan (1964). That study found the highest incidence of respiratory illnesses during the winter months. Our data were collected from 2/15/70 to 3/13/70 and from 5/11/70 to 6/11/70. Projecting from those two months to twelve months provided an estimate of about five

respiratory incidents per year according to the nurse and 12, according to the mother. For the age group below three, the Cleveland study found about eight incidents per year. For those of the three year olds attending nursery school the annual number of incidents was 12.

This comparison of our data to the Cleveland data is a rough one since we did not employ their careful measures to determine when one long episode of symptoms should be considered two incidents and, unfortunately, their technique did not permit them to calculate the number of days of illnesses. However, our data, using either the nurse's report or the mother's report, seem to be close to the range of their data.

Summary

In 15 pairs of matched Home and Center children (from middle class families) between the ages of three months and three years, few significant differences were found between the groups on mental, motor, or social development. Those differences which were significant favored the Center children; the absolute values of the mean differences were small. Height and weight measures have not been analyzed statistically, but inspection of the data suggests that the small differences which exist, if found to be significant, will show the Home children to be shorter and heavier. Illness data were difficult to collect, but the Center children appear to have had significantly more illness. The only individual symptoms which were found to be significantly different were Diaper Rash and Cold/Runny Nose.

V. OUTGROWTHS OF THE DEMONSTRATION

On a practical level, the Demonstration has shown something of what is required in providing quality care to a group of babies and toddlers: what is required in housing and equipemnt, in food, supplies and services, in the ratio of adults to children, in daily program. And it has shown what all this may cost.

Publications

Without the Demonstration to give us "the courage of our convictions" it is hard to see how we could have prepared for the state of North Carolina a statement of standards for infant/toddler group care. A statewide effort, coordinated by the Institute of Government, University of North Carolina at Chapel Hill, resulted in a document filed in December 1968 with the North Carolina State Board of Social Services: "Report of the Standards Development Committee for Child Day Care." This report outlined criteria for "custodial" level and for "child development quality" day care in the areas of health, program, physical plant, administration, and (in a separate chapter) of infant/toddler group care.[9] The report noted that to present recommendations for group care of infants is "... to a large extent breaking new ground in day care ..."

The writing of the criteria in all the above mentioned areas went through four drafts and represented the active involvement of some 200 persons over the state. The document was adopted in February 1970 by the State Board of Social Services and forms the basis for a revised and up-dated set of standards for licensing of day care facilities. (To be published, 1970.)

The section on infant/toddler care has been used as a guide by a number of other states currently involved in drafting standards for infant group care. Some states are also writing these into their licensing regulations for the first time.

A spin-off from the "Criteria" statement is a series of leaflets "What Parents Should Look For ..." The series is in the planning stage at present, with a preliminary version of only one of the leaflets being now available. This is the leaflet dealing with "Special Provision for Infants and Toddlers."[10] It has proved to be the hand-out equivalent of a "best seller," having gone through four printings with a total of some 6,000 copies now in circulation.

Our other "most wanted" document has been "The Good Life for Infants and Toddlers," first prepared as a symposium paper for the Day Care Council of New York, Inc. It was printed by the Day Care Council along with five other papers in a booklet entitled: Education and the City Child --- Some New Approaches.[11] "The Good Life ..." in a slightly modified form has been published also (in 1970) by the National Association for the Education of Young Children.[12]

Appended to this report (p. 65-- Footnotes) will be found a listing of the various materials produced by the Demonstration between 1966 and 1970. Most are in mimeo form and may be obtained by writing the project office.

Consultation

Members of the professional staff have been in demand as consultants to various projects over the country. Sometimes we have traveled to the site of the project that requested consultation; more often staff members responsible for other projects have come to visit us. Some have spent one day at our Center, others have stayed two to four days, conferring with staff, participating in the life of our Center, observing the research staff at work, etc.

The professionals on our staff have also carried a rather considerable load of work involving speaking at meetings, conducting workshop sessions, participating in seminars, and so on. We have found a heavy demand for the persons who speak from experience with actually operating programs of infant group care.

VI: "THE LAST WORD" : SHALL WE SERVE INFANTS IN GROUP CARE?

Shall we serve infants in group care? Sixty or seventy years ago this question would not have been asked. Or if it were raised, the answer most probably would have been, "Why not?" The assumption was that many babies might be better off in well-run institutions --- clean, with good food, and a regular routine --- than in poor, dirty, "neglectful" homes. America was proud of its institutions, and visitors were shown the contrasts between poor surroundings where children were playing in streets and gutters or abondoned on doorsteps, and the clean, efficient nurseries where there was concern for clothes and baths and food.

Twenty years ago, the now-classic Bowlby report, Maternal Care and Mental Health, was published by the World Health Organization --- and the shock effects are still being felt. Although not all the revulsion against the idea of infants and toddlers being reared in institutions can be traced to the influence of the Bowlby report, it can probably be fairly stated that no agency report in recent history has had a more profound effect on social work practice, on practice in the health professions --- especially mental health --- and perhaps even on legislation than has the Bowlby work.

Dr. Bowlby startled and frightened us all, convincing even naive laymen of the irreparable damage resulting from depriving babies of "mothering." Terms such as "maternal deprivation," "early emotional frustration," "hospitalism," "multiple mothering," and "institution-alization" have gained wide currency and have become "bad words" in the vocabulary.

And "bad words" they remain, almost ten years after a second WHO report, Deprivation of Maternal Care --- A Reassessment of its Effects, clarified the theory of maternal deprivation, highlighted the controversies, and set forth criticisms of the theory.

It is indeed a matter of great importance that the various researches into the consequences of maternal deprivation have succeeded in drawing the attention of many categories of professional worker and even of parents to the problem. It is right that thought should be given to the consequences of enrolling infants in day nurseries, to the policy of placing children in "shelters," children's homes, and boarding institutions, to the ready admission of very young children to hospitals and convalescent centers and to the casual policy of keeping them there for considerable periods of time, with cool indifference to the effect on their development.

What some of the WHO studies really point out to us, says Barbara Wootten in Deprivation of Maternal Care, is " . . . a truth which surely man has known in theory for as long as he has ignored it in practice . . ." --- i.e., that children need dependable love and that ". . . as things are, they are more likely to find this in families than in institutions."

It happens, however, that experience as a professional nursery school teacher prevents one from making the assumption that a day care center is an "institution," and from expecting that children in day care will develop the symptoms of "institutionalism" so horrifyingly depicted by Dr. Bowlby and Dr. Spitz, among others. And although children in all-

day care do indeed experience separation from their mothers, it rarely follows that they therefore experience maternal deprivation. Children in day care know very well who their mothers are, they go home with them every evening, spend the week-ends in their own homes in their parents' care. Thus it seems pointless to debate whether placement in a day care arrangement means maternal deprivation that will inevitably result in "institutionalism," "ego distortions," or "permanent residual impairment of development."

However, one may still maintain that the out-of-home daytime care of children younger than two years in groups presents special hazards and demands a serious concern for a variety of safeguards. What are some of these concerns or safeguards? On a very practical level we may ask: Can adequate protection of physical health and safety be assured to babies who are daily taken outside their own homes? Can healthy personal-social attributes be fostered? Can the infant develop a sense of trust? Can the toddler learn independence and develop autonomy and a sense of mastery? Will interest in the surroundings and healthy curiosity grow in a group setting? Will the child learn to feel good about life, feel good about himself, feel good about other persons, and about living with others? Can appropriate intellectual stimulation and opportunity for sensori-motor learning be offered to children under the age of two when their mothers arrange for their care in a group?

The need was never greater --- to find answers to such questions, to examine the hazards, to find how to apply the safeguards where infants and toddlers are being cared for by persons other than their own mothers.

Mothers are returning to work when their children are still in infancy. Furthermore, tremendous pressures are exerted on women, from AFDC mothers to mothers who are doctors, nurses, social workers, teachers, librarians, and members of still other professions, to join the labor market. Competent household help is increasingly difficult to obtain. Day care home arrangements are available to and preferred by relatively few mothers. There have been developments in antibiotics and in immunizations against the serious childhood diseases. We have seen some relaxing of the intense concern about the effects of "multiple mothering." There is new knowledge about the potentialities for learning in the early months and years of life, and a new appreciation for both the emotional and cognitive needs of infants. The Head Start idea for "disadvantaged" children is being extended downward into infancy in the "Parent and Child Centers" effort. New programs for teen-age mothers involve arrangements for the care of their babies while they continue in school and have access to programs of vocational education as well as education for child rearing. All these trends and developments make it feasible as well as imperative that a new look be taken at possible alternative arrangements for infant care and that quality care be defined and demonstrated.

But the needs and demands of a crisis situation almost always pull in an opposite direction from the maintenance of standards of quality. We have an existing body of knowledge about what constitutes good care for babies. Shall we toss it aside, ignore it, because of the crisis basis of the situation in which we presently find ourselves --

-- i.e., women, agencies, government projects demanding programs for infants and toddlers, demanding so insistently and in such multitudes that individual care in a home setting seems out of the question for most? What are we to do, we who may agree that the ideal arrangement for upbringing in the period of infancy and toddlerhood has not been and is not now conceived of as a group situation? How do we stem this tide of demand? By legislation that makes it illegal to care for under-twos in groups? By enforcing standards that make it financially impossible or in no way feasible to care for babies in groups? By persuasion convincing mothers that they really must stay home with their children for the first two years of their lives? By testing whether and how babies can thrive in group care? By demonstrating what the highest standards look like when incorporated into a day to day program?

The findings cited above (pp. 44-45) show no deficits in mental/social/motor/physical development in children cared for in our Nursery Center, compared to those cared for in good homes. Shall we then conclude that it is quite acceptable to serve infants in group care? We would maintain that at this stage such a question may be fairly answered only by a "No, not unless..." or a "Yes, but only if..." statement. No, babies may not be expected to thrive in a group situation unless very special provision is made for individualizing the care they are given. Yes, babies may do very well in group care but only if caregiving of a certain quality is provided. We have certainly not "proved" that group experience is not detrimental to infants and toddlers. We can only say that for our sample of babies who had a daytime group

experience that was the best we knew to provide, we found no important differences between them and a comparable group of babies reared in their own good homes. The key point, however, is quality care and our findings cannot be interpreted apart from the setting that produced them --- the full, rounded experience of affectionate, thoughtful care the babies in the Nursery had, day after day.

Shall we serve infants in group day care? We wish we knew! We wish we could give an unequivocal answer, but we believe it must remain open to question. At times we even wish our own findings were not so encouraging. We find it disturbing to hear the casual comment, "It's OK, you know. Down there in Greensboro they've shown it's OK, the babies aren't harmed." And we expect that to the visitor to our Nursery it all looks deceptively simple, really quite easy. But we should emphasize that it is not easy, this warm, affectionate, individualized care. Those beneficent intimacies of home life, so important, are impossible to guarantee in any and every setting. Yes, it can be done. This we have shown. Can anyone do it? We hope so, but we doubt it. Not that we are the only ones with the requisite know-how. Rather, we have hardly defined for ourselves yet what it is that we must provide. We cannot at this point state with certainty what is a necessary minimum, what is sufficient, what is optimal. So much remains to be learned, to be demonstrated, before there is a model or models for many to follow. In the meantime, babies are vulnerable, toddlers at the mercy of our groping efforts to learn. We would urge: let us move into this field cautiously, carefully, putting the babies' interests ahead of new projects, of mothers' demands, of the excitement of another pioneering effort.

Three years from now, five years from now, we expect to be closer to the final answer. Let us hope we are given time to formulate an answer that is both intelligent and helpful.

FOOTNOTES

1. *Patterns of Daytime Care of Infants Under Three Years of Age. A Survey in Guilford County, North Carolina. 1965.* Mimeo. Copies available on request.

2. For this project, a planning grant was provided in calendar year 1966; funds for establishing and operating the Nursery Center and for the evaluation research became available in January 1967; the Nursery opened in June 1967.

3. *Basic Understandings Between the University of North Carolina at Greensboro and the Presbyterian Church of the Covenant, Greensboro* in relation to the use of church property for operating the UNC-G Demonstration Nursery Center. Mimeo. Copies available on request.

4. *Staff Responsibilities and Job Descriptions, UNC-G Demonstration Project. Group Care of Infants and Toddlers.* Mimeo. Copies available on request.

5. *Learning and Teaching in a Center for the Care of Infants and Toddlers.* By Thelma Arnote. Mimeo. Copies available on request.

6. *Suggested Equipment and Supplies for Infant-Toddler Center.* (Revised 1969) Copies available on request.

7. *A Demonstration Project: 'The Good Life' for Infants and Toddlers.* Paper presented by Mary Elizabeth Keister, Project Director, at a Symposium sponsored by the Day Care Council of New York, Inc. April 30, 1969. Mimeo. Copies available on request.

8. *A Summary of the Essential Understandings Between the Demonstration Nursery Center and its Patrons.* Mimeo. Copies available on request.

9. *Report of the Standards Development Committee for Child Day Care.* Chapter V Infant Toddler Care. pp 48-60. Commissioned by North Carolina State Department of Social Services. Coordinated by Institute of Government, University of North Carolina at Chapel Hill. December 1968. Offset. Copies available on request.

10. *What Parents Should Look For --- Special Provision for Infants and Toddlers.* Mimeo leaflet. Copies available on request.

11. *Education and the City Child --- Some New Approaches.* Day Care Council of New York, Inc. 114 East 32nd Street, New York, N. Y. 10016. Copies from the Council, on request.

12. *"The Good Life" for Infants and Toddlers.* Report on a Demonstration Project. By Mary Elizabeth Keister. NAEYC, 1834 Connecticut Avenue, N. W. , Washington, D. C. 20009. 1970. $1.50 per copy.

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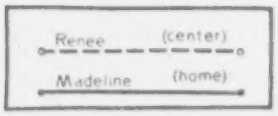
A P P E N D I X A

CURVES OF RAW SCORES ON DEVELOPMENTAL

MEASURES FOR EIGHT OF THE MATCHED PAIRS

OF HOME AND CENTER CHILDREN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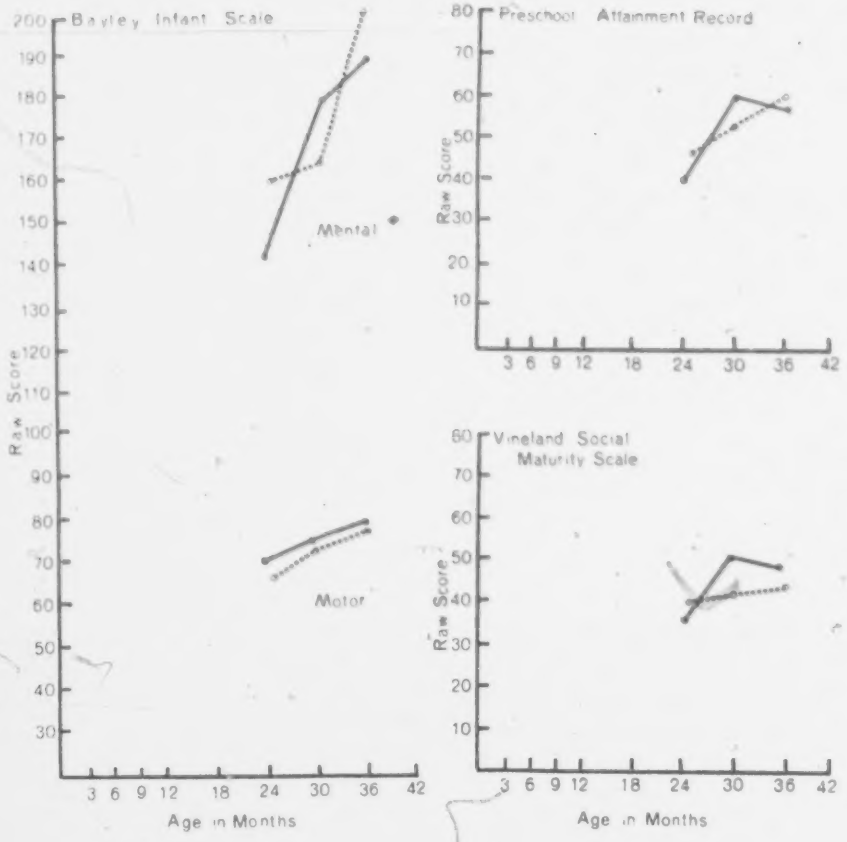
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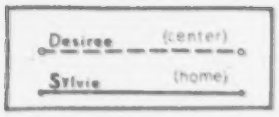
Age in Months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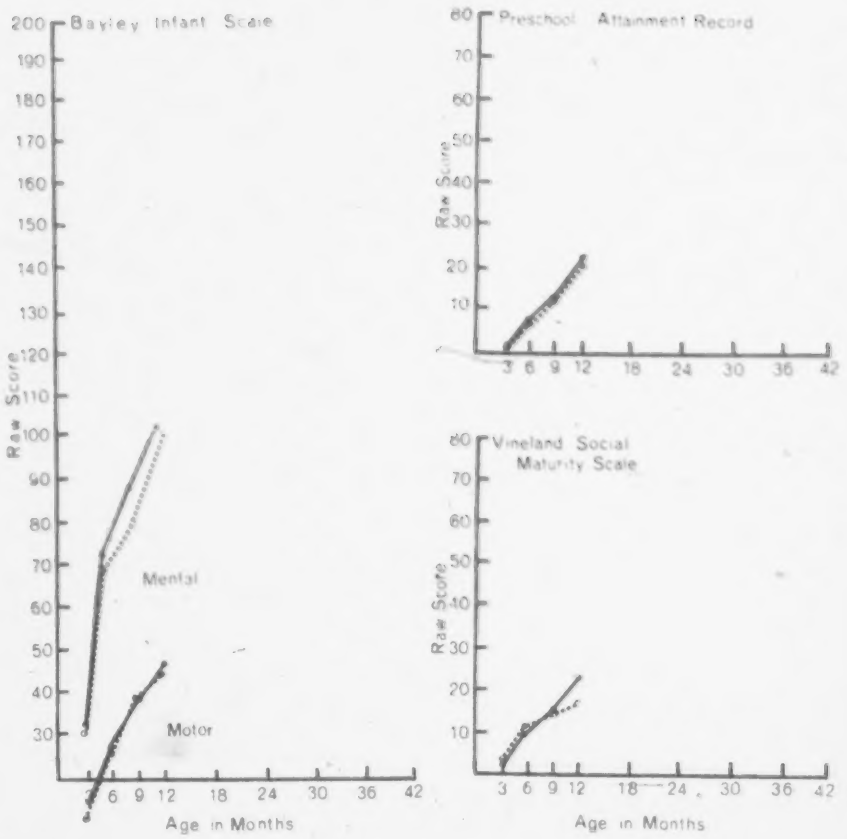
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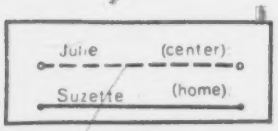
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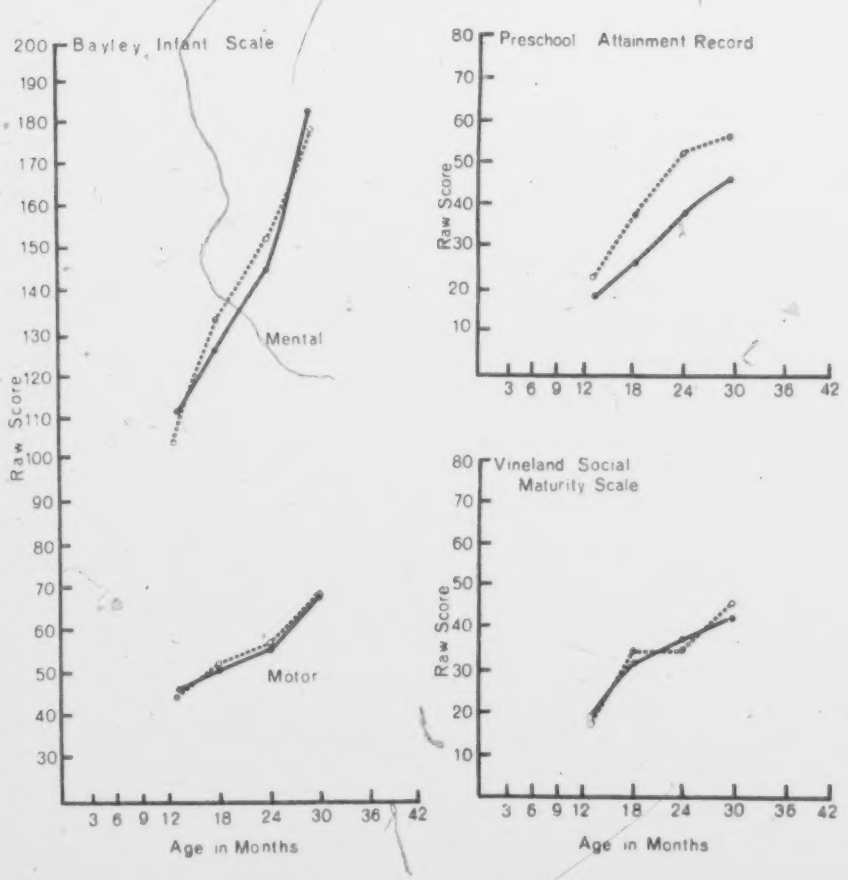
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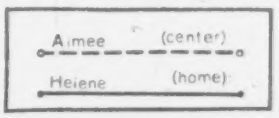
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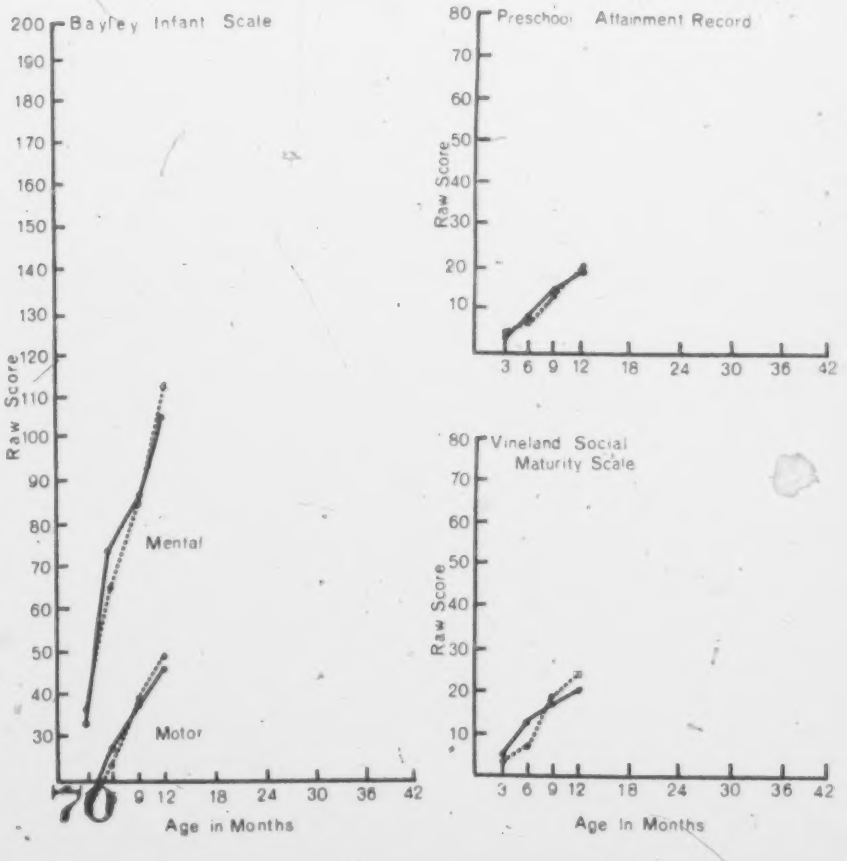
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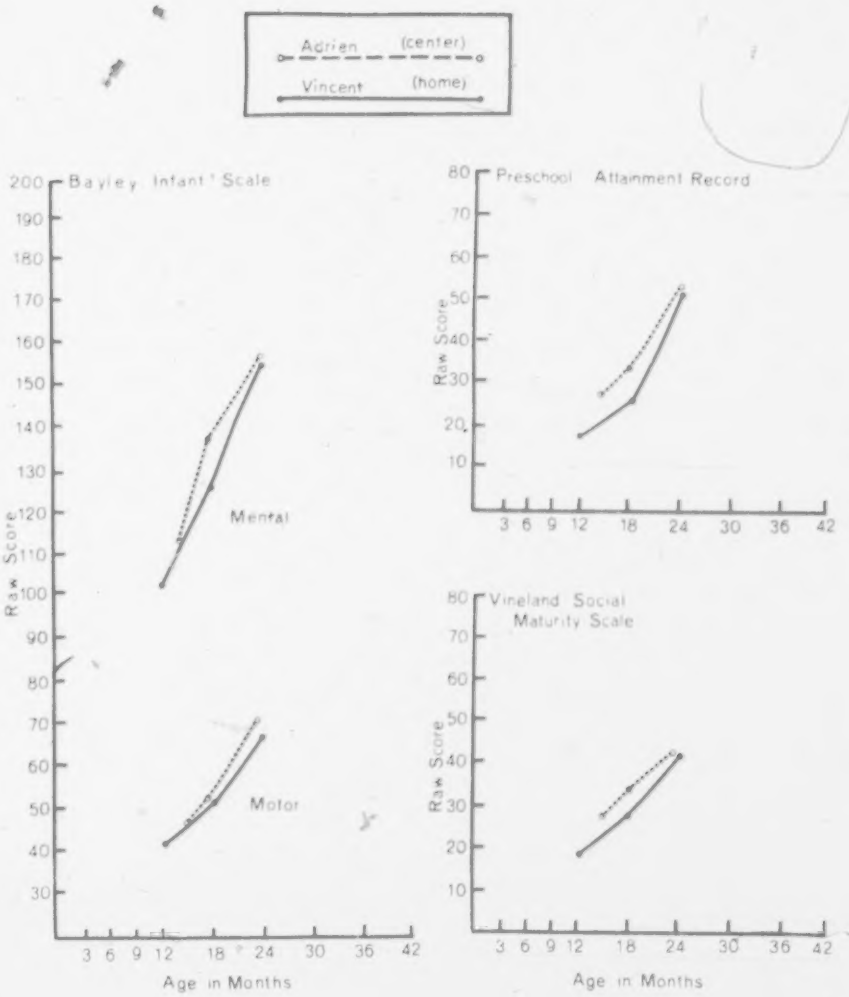
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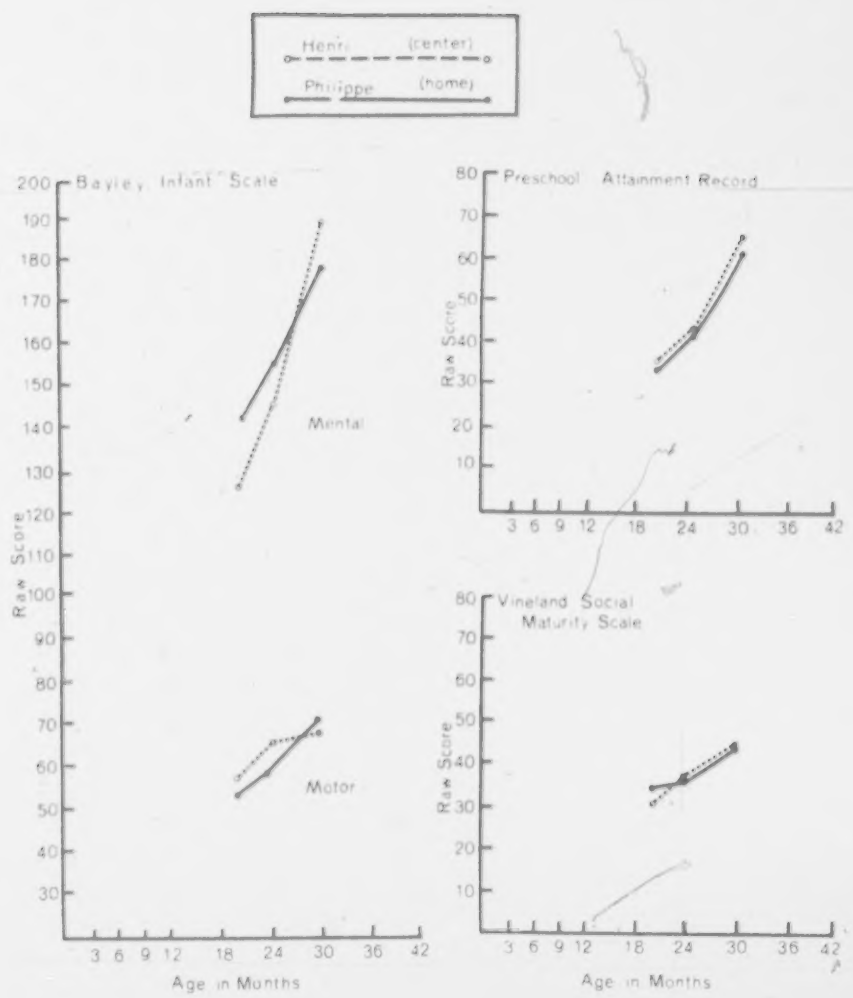
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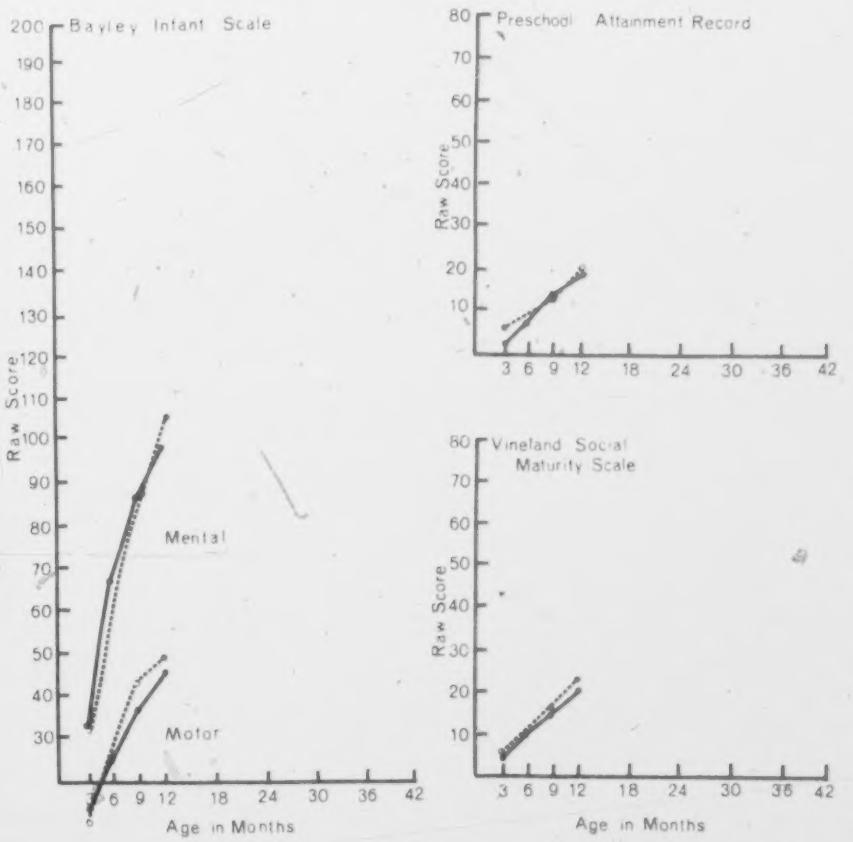
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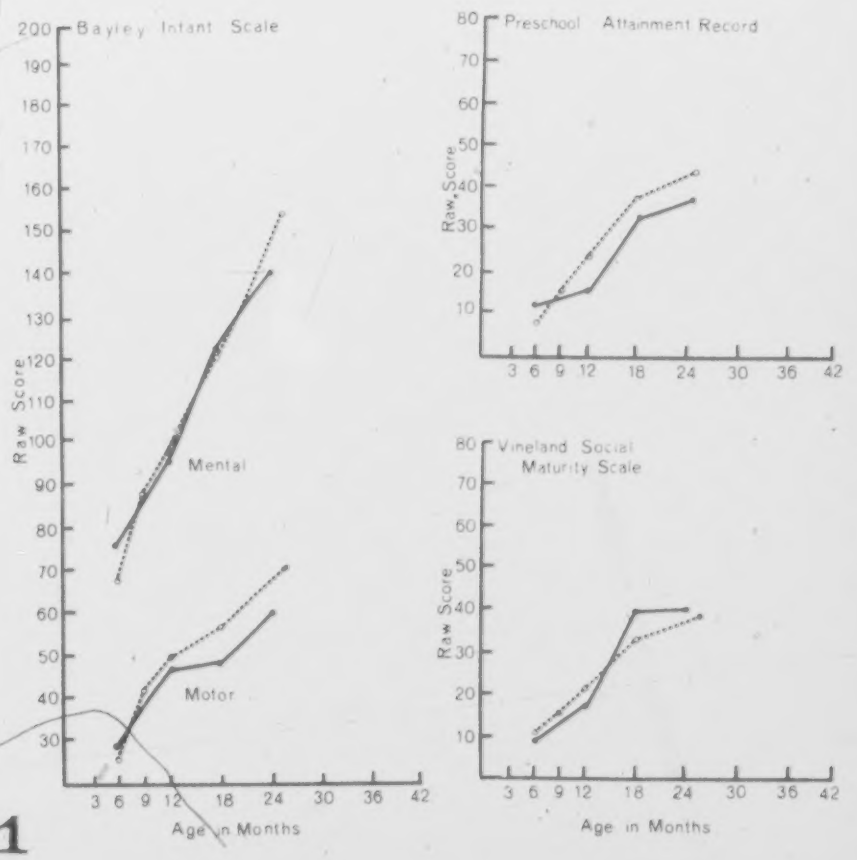
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Age in Months